US BUREAU OF RECLAMATION

WaterSMART: **Water Recycling and Desalination Planning**

Program Funding
R23AS00076
Funding Group II

FEBRUARY 28, 2023

February 28, 2023

Donald C. Tillman Water Reclamation Plant
Advanced Water Purification Facility Project

Technical Proposal and Evaluation Criteria
for

WaterSMART: Water Recycling and Desalination Planning
Funding Opportunity Number: R23AS00076

Applicant / Project Manager:

City of Los Angeles
Ryan Thiha, P.E., Assistant Division Manager
LA Sanitation and Environment
Wastewater Engineering Services Division
6100 Woodley Ave,
Van Nuys, CA 91406
ryan.thiha@lacity.org
Phone: 323-342-6229

Submitted to:

Bureau of Reclamation
Financial Assistance Operations Section
Attn: NOFO Team
P.O. Box 25007, MS 84-27133
Denver, CO 80225
Phone: 303-445-2766

Table of Contents

EXECUTIVE SUMMARY

DATE: February 28, 2023
APPLICANT NAME: City of Los Angeles
CITY / COUNTY: Los Angeles, Los Angeles County
STATE: California
APPLICANT CATEGORY: Funding Group II

The City of Los Angeles (City) is requesting grant funding for the design and engineering activities to implement the Donald C. Tillman Water Reclamation Plant (DCTWRP) Advanced Water Purification Facility Project (DCT AWPF Project). The Project's goal is to develop the 100% design for an advanced water purification facility (AWPF) to treat up to 19 million gallons per day [MGD] of tertiary effluent from the DCTWRP to produce up to 15.5 MGD (17,000 acre-feet per year [AFY]) of Indirect Potable Reuse (IPR) water to be conveyed to and spread at the Hansen Spreading Grounds (HSG) for replenishment of the San Fernando Valley Groundwater Basin (SFGWB), a major source of local water supply. This is a critical capital project for the City's water recycling infrastructure, which aims to produce a new, local, resilient, and reliable water supply to sustain local groundwater basins, diversify the City's water portfolio, and decrease the region's dependence on imported water.

The length of time to complete the DCT AWPF Project is approximately two years. The Project's current estimated completion date is in October 2025. The Project is expected to be completed before the grant's funding period ends on October 31, 2025.

The estimated cost of the design and engineering activities for the DCT AWPF Project is $22,830,735. The City is requesting from the Bureau of Reclamation the funding amount of $5,000,000.

The DCTWRP and the Project are located within the Sepulveda Dam Flood Control Basin, which is owned by the United States Army Corps of Engineers (USACE). The City and the USACE have an active lease agreement expiring in 2046 for public park and recreational purposes, and an active easement agreement expiring in 2056 for the operation, maintenance, and repair of the DCTWRP. The USACE was made aware of the DCT AWPF Project and is not associated with the Project.

PROJECT LOCATION

The Project is located in the City of Los Angeles, Los Angeles County, in Southern California. The address of the DCTWRP and the Project is 6100 Woodley Ave, Van Nuys, CA 91406.

TECHNICAL PROJECT DESCRIPTION

APPLICANT CATEGORY: Funding Group II. The estimated total cost of the DCT AWPF project along with various enabling components is upwards of $560 million.

ELIGIBILITY OF APPLICANT: The City of Los Angeles Bureau of Sanitation (LASAN), a bureau of the Department of Public Works, is the sanitation agency and owner of the DCTWRP. The DCT AWPF Project is a collaboration of LASAN with the Los Angeles Department of Water and Power (LADWP), which has water and power delivery authority in the City.

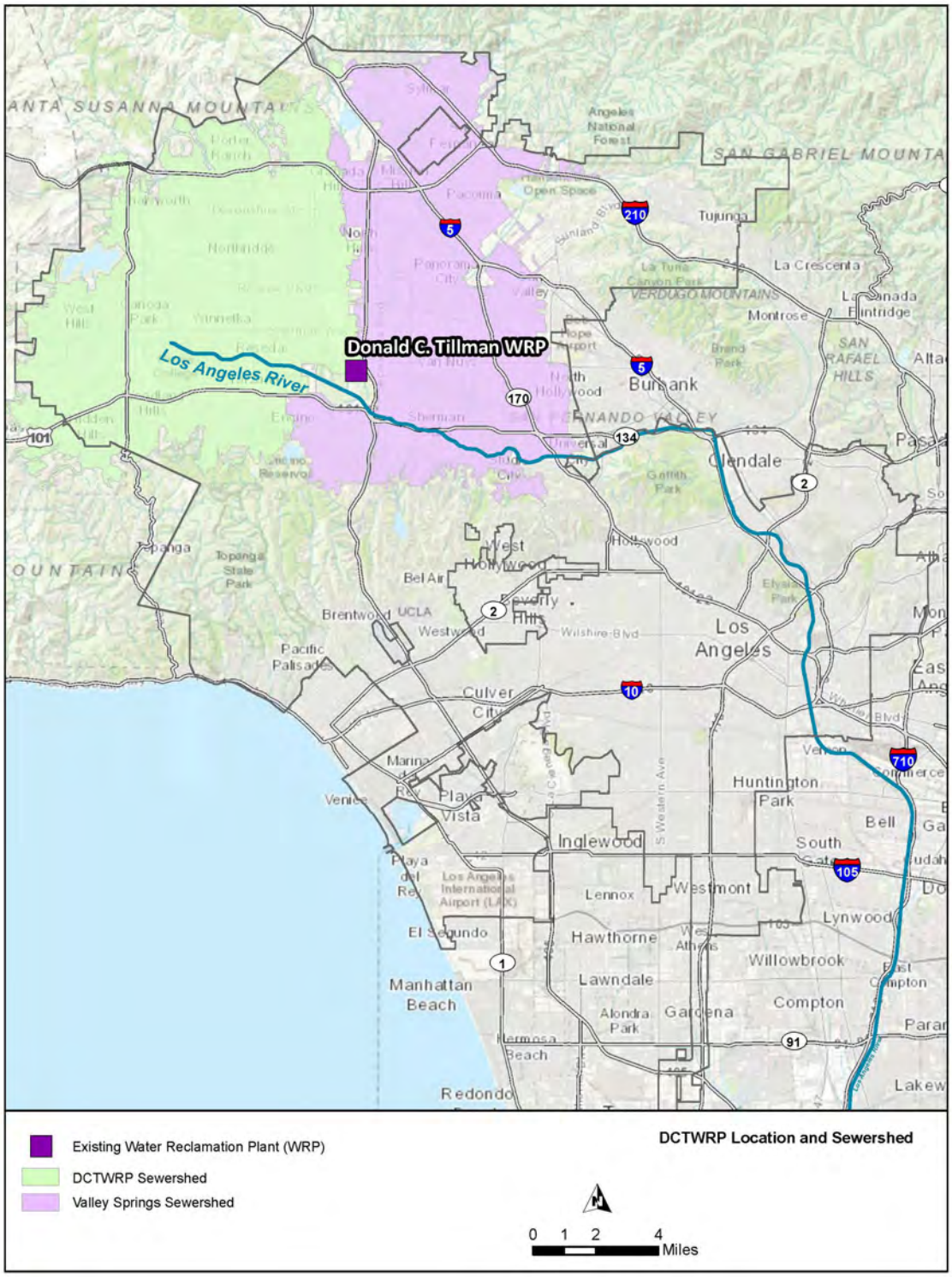
PROJECT OVERVIEW, BACKGROUND, GOALS, AND APPROACH:
Los Angeles is the most populous city of California (population 3.9 million people according to the 2020 Census) and the second most populous city in the United States. The City is primarily reliant on imported water supplies, such as the California State Water Project (SWP), Los Angeles Aqueduct (LAA), and Colorado River Aqueduct (CRA), with limited local water (groundwater, stormwater capture, conservation, and water recycling). LADWP provides approximately 512,504 AFY of water to its customers. LASAN, responsible for the City's wastewater collection and treatment systems, operates four water reclamation plants (WRPs) and 6,700 miles of sewers.

Imported water supplies, providing up to 90 percent of the City's potable water demand, are highly vulnerable to cutbacks from droughts, environmental demands, natural disasters and infrastructure failures. Local groundwater and stormwater sources are also highly susceptible to drought and legacy contaminants, which limit direct use. Social and economic impacts associated with the City's water supply challenges include limited supplies to meet demands, increased cost of living, fire hazards, natural disasters, and rising imported water cost.

L.A.'s Green New Deal, Sustainability Plan 2019 establishes long-term goals to reduce imported water use, increase local water supplies and to diversify its water portfolio to enhance long-term reliability and climate-change resiliency. Potable reuse was identified as a major local supply that could provide up to 50 percent of the total potable water demand.

The DCTWRP is the City's largest upstream reclamation plant and serves numerous communities in the San Fernando Valley with the population of about 1.8 million. DCTWRP's location and sewershed is shown in Figure 1. The plant currently has the capacity to treat up to 80 MGD to produce Title 22 tertiary effluent, making it the ideal candidate for water recycling with the addition of an AWPF. With this upgrade, the DCTWRP will be able to produce a new, local, resilient, and reliable water supply source to sustain local groundwater basins, build water supply resiliency, diversify the City's water portfolio, and decrease the region's dependence on imported water.

Figure 1: DCTWRP Location and Sewershed



Project Goals:

The DCT AWPF Project's goals include:

- Advance the City's water policy goals to reduce the reliance on imported water to manage water scarcity and adapt to drought conditions across the Western United States
- Secure a local water supply up to 17,000 AFY of recycled water for groundwater replenishment and indirect potable use
- Leverage existing conveyance and storage systems to equitably, efficiently and cost-effectively distribute recycled water for beneficial reuse
- Collaboratively develop a regional recycled water system to holistically increase beneficial use of available local water supplies and storage capacity
- Create an integrated water strategy that improves water security and resiliency in a cost-effective, environmentally sound manner to address the effects of climate change

Project Approach:

The City has conducted multiple studies and pilot tests to develop its recycled water infrastructure for potable reuse at DCTWRP and other water reclamation plants. The goal was to determine an approach for full-scale implementation for water recycling that would satisfy regulatory requirements, protect public health, and mitigate environmental effects while minimizing costs and maximizing water production.

To achieve these goals, the City is seeking to treat non-disinfected tertiary effluent from the DCTWRP with a new Advanced Water Purification Facility (AWPF) to produce recycled water for IPR. The AWPF will be implemented as part of the larger LA Groundwater Replenishment (LA GWR) Project, a City partnership that strives to deliver highly purified water for potable reuse via surface spreading into the SFGWB.

The Reclamation grant funding will be used for the development of the 100% design for the DCT AWPF Project. The AWPF will treat up to 19 MGD of tertiary effluent to produce up to 15.5 MGD (17,000 AFY) of recycled water. The recycled water will be conveyed via an existing recycled water pipeline to be spread at the Hansen Spreading Grounds to replenish the SFGWB.

The AWPF will be designed to meet the standards for groundwater recharge via surface spreading per Title 22, Division 4, Chapter 3 of the California Code of Regulations. The treatment train of the AWPF will be a "Full Advanced Treatment" train, composed of a microfiltration (MF) system, a reverse osmosis (RO) system, and an ultraviolet advanced oxidation process (UV AOP) system. The MF system will remove particulate matter from the tertiary effluent to provide acceptable feed water quality to the downstream RO system, which will have a recovery rate of 80% during operation. The UV AOP system will disinfect pathogens and reduce trace organic chemicals in the RO system's permeate via direct photolysis and reaction with hydroxyl radicals formed when an oxidant is exposed to UV light. The chemical oxidant for the UV AOP system will be sodium hypochlorite. The design UV and oxidant doses will be based on achieving three goals: 6 log reduction of pathogens, reduction of NDMA to less than 10 nanogram per liter, and 0.5 log reduction of 1,4-dioxane.

The design and engineering activities to develop this treatment train include:

- Design initiation
- Project coordination and management
- Project requirements and existing documentation review
- Site investigation
- Development of basis of design report
- Building information modeling
- Technical exhibit documents preparation (30% design, 70% design, cost estimates)
- Finalize design (100% design)

N.B.: The Project will be delivered by a Progressive Design-Build (PDB) contractor. At 70% design completion, the PDB contractor will prepare a construction cost estimate that is to be reviewed and agreed to by the City before the PDB contract is amended and the PDB contractor can move forward with the 100% design work.

RESPONSES TO EVALUATION CRITERIA

EVALUATION CRITERION 1 – PROJECT PLANNING AND ANALYSIS

Subcriterion 1a – Water Recycling Needs and Opportunities

1. Describe the problems and needs in the project area

The water infrastructure problems of the City of Los Angeles stem from the ongoing climate change crisis and are exacerbated by the City's own history of reliance upon imported water.

According to the National Integrated Drought Information System, California has been experiencing drought almost continuously since 2011, accumulating stress on the state's water supplies such as the Owens River, the Mono Lake Basin, San Francisco Bay, and Sacramento-San Joaquin River Delta – all of which supply the City's water via the LAA or SWP. Outside of California, Lake Powell at the Arizona-Utah border and Lake Mead at the Arizona-Nevada border have been experiencing a dry period since 2000, reducing from about 92 percent full to about 25 percent full in February 2023. Both lakes are part of the Colorado River Basin, which supplies the CRA – another major source of the City's water. Furthermore, the SWP, LAA, and CRA all must cross the San Andreas Fault among others, making them vulnerable to seismic activity and putting the majority of the City's drinking water at risk if a major earthquake were to occur.

The effects of drought on these water supplies are well recognized. The 40 million users of the Colorado River's water across seven states have been asked to cut their consumption voluntarily or face mandatory restrictions. In California, several statewide emergency water conservation measures are in place, including a ban on watering most commercial, industrial, and institutional decorative grass. Additional mandatory restrictions are in place in the City of Los Angeles including limiting outdoor watering to two days a week.

In order to address the City's water supply problems in the long term, we need to strengthen our local water supply, expand our water supply portfolio, and reduce our dependence on imported water.

Currently, only about one-tenth of the City's total water supply is local, mainly from groundwater. The SFGWB, the largest aquifer within the City, makes up on average about 90% of the City's groundwater supply, and has an available storage capacity of 500,000 acre-feet. However, two-thirds of its 115 water wells are not in use due to groundwater pollution dating as far back as the 1940s. In addition, the amount of groundwater stored in the Los Angeles area's basins has been in decline for several decades. Lack of precipitation due to drought, the impacts of climate change, and a rise in population and commercial activity within the Los Angeles region have resulted in an increased demand for surface water and groundwater supplies.

Lastly, the demand for water is expected to increase in the region in coming decades. An anticipated 0.64 percent annual growth rate in the next quarter century will add approximately 750,000 people to the region, according to the Southern California Association of Governments (SCAG), increasing water demands on the system while also increasing wastewater flow.

The DCT AWPF Project will address these needs by recycling the City's wastewater – a local, resilient, and reliable water source that has remained untapped – to create a new water supply to replenish the City's SFGWB, making use of its enormous water storage capacity.

2. Describe the current and projected water supplies and demands in the project area

Primary sources of water for the LADWP service area are the LAA, SWP and CRA. These supplies are classified as imported because they are sourced from outside LADWP's service area. Approximately 90 percent of the City's water is obtained from non-local sources.

The City's current water supply mix results in a heavy dependence on snowfall and sufficient storage in Northern California, the Eastern Sierra Mountains, and the Colorado River watershed. In recent years, drought conditions and climate change has impacted the amount of snowfall in the Eastern Sierra and the Colorado River watershed. The Bureau of Reclamation has asked the seven states who rely on Colorado River water – including California – to come up with a plan to reduce their use of the river's flow by 2 million to 4 million acre-feet a year.

Recent City studies have shown that availability of water from LAA is also at risk. LADWP completed a climate change study (2011 Climate Study) on the Eastern Sierra Nevada region to evaluate potential impacts to the LAA system. Results suggested an increase in temperature of 8°F, a reduction in precipitation of 10 percent and a reduction of snowpack in the Eastern Sierra Nevada region by the end of the 21st century. A 2020 update to the study showed similar results. These hydrologic changes may limit the City's ability to tap LAA as a source of water.

A continued dependence on imported water is a risky and unsustainable practice that makes the City entirely vulnerable to unexpected changes to the imported water supplies caused by climate change or any other factors beyond the City's control.

While supply of water dwindles, demand in the region continues to grow. The City's service area population is expected to continue to grow over the next 25 years at a rate of 0.64 percent

annually. This rate is similar to the historical 0.7 percent annual growth rate from 1980 to 2020 and will lead to approximately 765,112 new residents over the next 25 years.

As the City's water demand grows, so does its wastewater production. This principle makes wastewater a reliable source of water that is always available and at the same time resilient to effects of climate change, making it the perfect candidate for the DCT AWPF Project's recycling.

3. How planning activities will investigate potential uses/markets for reclaimed water

Previous planning activities have investigated and identified that the recycled water produced by the AWPF will be used for replenishing the SFGWB via spreading at the HSG. The goal is to augment the SFGWB and make use of it as a water storage to be pumped and treated for potable uses as needed.

LADWP currently serves approximately 179 sites in the City with recycled water for irrigation and industrial uses. Future expansions of the plant's water recycling capacity may see additional opportunities to build on these successful projects to expand recycled water use.

4. Describe the source water that will be considered for the project

The source water for the DCT AWPF Project will be tertiary effluent produced by the DCTWRP that is not yet disinfected. The DCTWRP currently has an average influent flow of 50 MGD – about 9 MGD becomes waste process streams that are conveyed to the City's Hyperion Water Reclamation Plant for further treatment, and about 41 MGD becomes tertiary effluent. Up to 19 MGD of this effluent will be feed for the AWPF.

Subcriterion 1b – Evaluation of Project Alternatives

1. Describe the objectives that all alternatives will be designed to meet

Due to the unpredictability of imported water supplies, the City aims to increase the reliability and sustainability of its local water resources, as part of the City's Urban Water Management Plan (UWMP), through initiatives such as water conservation, stormwater capture, groundwater remediation, and water recycling.

From 2009 to 2012, the City pilot tested technologies for potable reuse at DCTWRP. Changes to Groundwater Replenishment Reuse Regulations (GRRR) made by the California State Water Resources Control Board as well as new developments in advanced purification technologies prompted a second round of pilot testing at the start of 2016 to compare RO-based processes against alternative non-RO-based advanced treatment trains. The goals of these pilot tests were as follows:

- Determine the optimal approach for the full-scale treatment system;
- Maximize water recovery and minimize waste streams;
- Test efficacy of new advanced oxidation process technologies;
- Prequalify MF membrane systems for full-scale implementation; and
- Examine ozone and biologically activated carbon pre-treatment ahead of Full Advanced Treatment

All alternatives were to be designed to meet the regulatory requirements defined in Title 22, Division 4, Chapter 3 of the California Code of Regulations for groundwater recharge via surface spreading.

2. Describe how the planning activities will develop project alternatives

According to the results of past pilot studies, to achieve recycled water for groundwater recharge up to the standards in Title 22 of the California Code of Regulations, possible purification processes and technologies may include ozonation, biological activated carbon (BAC), microfiltration (MF), reverse osmosis (RO), and/or advanced oxidation process (AOP) systems to produce the necessary purified water. It was concluded that the DCT AWPF Project will have a Full Advanced Treatment train (FAT), composed of a MF system, a RO system, and an UV AOP system.

The DCT AWPF Project is a component of the City of Los Angeles Recycled Water Master Plan (RWMP) which intends to achieve a total use of recycled water of 59,000 AFY by 2035. The RWMP considered several options, with varying amounts of recycled water used for non-potable reuse and purified water used for groundwater replenishment. However, due to concerns about the SFGWB's declining natural recharge, the City concluded that the DCT AWPF Project's recycled will be used to replenish the SFGWB - improving its long-term health and making use of its large storage capacity. The HSG was chosen for spreading due to the existing 10-mile long East Valley Recycled Water Line that can transport 30,000 AFY and already interconnects DCTWRP and HSG. In addition, to use the DCT AWPF Project's recycled water for expanding non-potable reuse (NPR) would create significant challenges in terms of identifying enough customers, constructing an extensive infrastructure network to serve a widespread customer base, and dealing with higher capital costs related to infrastructure construction and maintenance. Therefore, alternatives that allocate recycled water for NPR were not considered viable and were not pursued.

3. Provide a general description of the selected project including project features, benefits, anticipated costs, and analyses conducted

The DCT AWPF Project will construct an AWPF with a FAT train consisting of MF, RO, and UV AOP. The AWPF will treat up to 19 MGD of tertiary effluent from the DCTWRP to produce up to 15.5 MGD of IPR water for replenishing the SFGWB via spreading at the HSG. The IPR water will be treated up to the standards defined in Title 22, Division 4, Chapter 3 of the California Code of Regulations for groundwater recharge via surface spreading.

The estimated cost of the design and engineering activities for the DCT AWPF Project is $22,830,735. The Project will also need various enabling components such as a primary equalization basin to provide constant flow for the AWPF and maintenance and warehouse facilities, making the total implementation cost to be upwards of $560 million.

The Project aims to produce a new, local, resilient, and reliable water supply to sustain local groundwater basins, build water supply resiliency, diversify the City's water portfolio, and decrease the region's dependence on imported water.

4. Include a preliminary schedule

The length of time to complete the DCT AWPF Project is approximately two years. The Project's current estimated completion date is in June 2025. In general, the Project is expected to be completed before the grant's funding period ends on October 31, 2025. Please refer to Table 1 for a preliminary schedule of the Project.

Table 1: DCT AWPF Project Preliminary Schedule

Activities	From	To
	Mar 2023	May 2023
BODR to 30% Design	May 2023	Dec 2023
30% to 50% Design	Dec 2023	Mar 2024
50% to 70% Design	Mar 2024	Jun 2024
Cost Proposal Review, Negotiation, Contract Amendment, and Final Design	Jun 2024	Oct 2025

EVALUATION CRITERION 2 – STRETCHING WATER SUPPLIES

1. Potential to reduce, postpone, or eliminate the development of new or expanded non-recycled water supplies

The DCT AWPF Project will produce 17,000 AFY of IPR for groundwater replenishment. The Project will make use of the SFGBW's large storage capacity. Sustained operations of the DCT AWPF when it is completed combined with ongoing water conservation efforts and future potential water recycling and groundwater replenishment efforts may see the SFGWB being used for 70% of the City's local water supply by 2035 – a goal outlined in the City's Green New Deal Sustainability Plan. The Project aims to meet this goal and replace the need for development of new or expanded non-recycled water supplies.

The increase in local reliable water supplies provides for a regional solution using underutilized resources to provide a sustainable water supply source that can be maximized in lieu of implementing other approaches such as desalination, increasing groundwater pumping or other non-recycled water supplies. The DCT AWPF Project will help begin moving the City's water supply portfolio to predominantly local water supplies from its imported sources, thereby substantially reducing or eliminating the need to develop new supplies.

2. Describe the potential to alleviate pressure on existing water supplies or facilities

The Project will directly alleviate the water supply stresses the City has experienced in the past by significantly reducing the City's dependence on imported water supplies with their variable availability and creating a recharge supply for the SFGWB. The City currently secures 90 percent of its water from non-local sources, of which the Metropolitan Water District (MWD) supplies approximately 49 percent. MWD obtains its supply from SWP suppliers including the Sacramento-San Joaquin Delta and the critically overdrafted Colorado River, both of which are subject to cutbacks. The direct recharge of local groundwater basins, through IPR, will enable the City to extract up to an additional 17,000 AFY to use for local potable water supplies and enable

the City to reduce its import of CRA and LAA waters which will alleviate pressure on the imported supply.

Offsetting large portions of imported water will make the City more resilient to emergency shortages as a result of periods of extended drought, infrastructure failures or natural disasters. SWP distributed to Southern California water purveyors is sourced from the Sacramento-San Joaquin Delta and delivered via the California Aqueduct and Coastal Branch Pipeline. If this conveyance system were to undergo major repairs, suffer severe damage, or otherwise go offline for an extended period, the SWP-dependent area of the City would not be able to receive any imported water deliveries. The new water supply provided by the Project will enable the City to have increased flexibility in deciding when and how much SWP, CRA or LAA waters to take in a given hydrologic year. This could allow the City to reduce deliveries of imported water by 17,000 AFY and thus alleviate pressure on the Sacramento-San Joaquin Delta and the Colorado River basin and/or reduce pressure on local groundwater basins.

3. Describe the potential to make water available to address a specific concern

The DCT AWPF Project addresses concerns associated with water supply shortages, water supply reliability, groundwater depletion, and groundwater contamination by producing 17,000 AFY of a new, resilient, reliable water to replenish the SFGWB.

Water Supply Shortages/Reliability: The City's current supply mix is heavily dependent on imported water from Northern California, the Eastern Sierra, and the Colorado River Watershed, but chronic and more severe droughts reduce the reliability of these imported water supplies. The year 2022 was the state's 9th driest in the past 128 years. In 2014, drought reduced the SWP initial delivery allocation to zero for the first time in history and ended the year at only five percent. CRA deliveries are also vulnerable due to two decades of drought and years of overdraw, and the river basin's water supply is at historically low levels. The unpredictable reductions in imported water supplies have both reduced imported water supply reliability and increased stresses on many groundwater aquifers. As climate change makes weather patterns more volatile, the City realizes it must decrease its reliance on non-local water supplies and develop a reliable and resilient source of water for its community.

Groundwater Depletion/Contamination: The Project will also address concerns about the health of the SFGWB. Two-thirds of its 115 water wells are not in use due to groundwater pollution dating as far back as the 1940s. In addition, the groundwater level has been in decline for several decades. Lack of precipitation due to drought, the impacts of climate change, and a rise in population and decades of expanding urbanization have made it more critical than ever to have a reliable source to replenish the basin. The DCT AWPF Project's recycled water that will be recharged into the basin can be stored and pumped to meet future demands – adding to the City's supply reliability strategy using a local water supply.

4. Describe the potential to help create additional flexibility to address drought

Rainfall amounts in the Los Angeles region are highly variable, ranging from 4 inches to 37 inches annually between 1922 to 2016, with the total annual accumulation decreasing over time.

According to the LADWP, hot and dry conditions increase water demand in the region by approximately 5 percent. The long periods of drought experienced by the region since 2012 have placed pressure on the system to make more water available. Population growth is also expected to further increase demand.

Because it imports 90 percent of its water from non-local sources that are subject to significant hydrologic variability, the City is vulnerable to drought and other effects of climate change experienced in the regions where its water is sourced. These sources have become less reliable as drought conditions become more frequent.

The Project's recycled water is resilient to droughts because it is not dependent on hydrologic conditions and is generated directly from a reliable source of water, the City's wastewater. Conveying DCTWRP's recycled water to the SFGWB provides a resilient water supply that increases operational flexibility and redundancy to the City's water portfolio thereby enabling it to better address drought. This supply can be used to meet demands or remain in the aquifer as storage for emergency use or other operational needs.

As out of our groundwater basin management strategy, The City utilizes conjunctive use strategies to optimize available surface water and groundwater to balance supplies with demand. Through conjunctive use, the timing of groundwater pumping can be altered to meet varying demands. During previous successive dry-year periods, LADWP pumped groundwater at greater-than average rates for the first few years of the dry period, then lowered its pumping rates and increased surface water use in subsequent years to facilitate groundwater basin replenishment. This strategic pumping serves to meet dry year needs while also preventing overdraft of a basin.

EVALUATION CRITERION 3 – ENVIRONMENT AND WATER QUALITY

1. Describe the potential to improve the quality of surface water or groundwater

Local groundwater is a key resource that the City has relied upon as a major component of its water supply portfolio. From 2015 to 2020, local groundwater provided approximately eight percent of the total water supply for Los Angeles. Many of the region's basins, including the SFGWB, West Coast and Central basins, are adjudicated or require treatment to be used due to the presence of contaminants.

The SFGWB is a vital local water supply to the City of Los Angeles and the San Fernando Valley. The SFGWB has suffered from overdraft and pollution over the years, and the Los Angeles Groundwater Replenishment Project is a critical part of the region's efforts to restore the beneficial use of the San Fernando Basin. Especially as the dependability of imported sources are negatively affected by the current California drought, the ability of the San Fernando Basin to sustainably and reliably serve water to the residents of the San Fernando Basin is becoming more critical.

The DCT AWPF will produce up to 17,000 AFY of recycled water to replenish the SFGWB, increasing its levels and improving the basin's water quality through augmentation with advanced treated, purified water – aiding the City's ongoing efforts to remediate the basin.

2. Potential to improve effluent quality beyond levels to meet State or Federal discharge requirements

The DCT AWPF Project will produce water with effluent standards beyond levels necessary to meet State discharge requirements. The Project will use FAT (MF, RO, and UV AOP), even though it is not required according to Title 22 of the California Code of Regulations regarding groundwater recharge for potable reuse with surface application. FAT produces high-quality recycled water with greater pathogen removal and greater total organic carbon (TOC) removal than other conventional potable reuse treatment systems for groundwater recharge via surface spreading. FAT's high level of treatment provides additional flexibility, because should the City want to instead implement groundwater recharge via subsurface injection, FAT already provides the appropriate pathogen removal. The surface application at HSG will also allow for soil-aquifer treatment to further treat product water as it percolates through the vadose zone.

The direct potable reuse (DPR) regulations in California are in draft form and expected to be finalized in 2023. Finalization of regulations will determine future expansions for the DCTWRP. In anticipation of these changes, the design of the AWPF will be developed with a modular design and installation approach in mind to allow for ease of future upgrades.

3. Describe the potential to improve flow conditions in a natural stream channel

Within the current portfolio of water supply sources serving Los Angeles, the largest source is imported water, representing 90 percent of the City's consumption. Within the imported supplies, the largest portion of water imports comes from the Bay Delta via SWP and the Colorado River via CRA. The recycled water produced by this project will offset a corresponding water demand that otherwise would need to be satisfied by imported water. This demand reduction translates to a greater quantity of water/flow through the Bay Delta and the Colorado River.

DCTWRP routinely discharges effluent to the lakes and the river, which flows through the Japanese Garden lake, Lake Balboa, and the Wildlife Lake to the Los Angeles River. The implementation of the DCT AWPF Project would not affect the flow to these bodies of water.

4. Describe the potential to restore habitat for non-listed fish/wildlife species

The flow study at the Upper Los Angeles River just below the discharge of DCTWRP concluded that the discharge would support aquatic life and protect beneficial uses in the Los Angeles River. These minor changes in flow depth and flow velocity during the various seasons would not noticeably change habitat conditions for the algal and benthic invertebrate communities present on the concrete bottom of the channel which may provide foraging habitat within the Upper Los Angeles River area for candidate, sensitive, or special status species. Thus, this flow is adequate to support Cladophora spp., an algal species indicative of the health of algae and benthic invertebrate communities (Stein et al., 2021b).

The DCTWRP provides flow to the Los Angeles River (LAR), located approximately 0.5 mile southwest downstream and serves as an important regional wildlife movement corridor for species associated with freshwater and riparian habitats. The flow to the LAR enables the riparian

corridor to support a variety of plant and habitat layers (i.e., mature trees, shrubs, and herbaceous vegetation) that facilitate bird movement along the river. The flow to LAR also provides a movement corridor for fish and other semi-aquatic species.

5. Potential to provide water or habitat for federally listed threatened or endangered species

Lake Balboa, Woodley Creek, the Japanese Garden Lake, the Wildlife Lake, and the Sepulveda Basin Wildlife Preserve along the 32 mile stretch of LAR impacts very few federal- or state-listed endangered or threatened species. Flows from the DCTWRP to the Sepulveda Basin may provide benefits for the endangered least Bell's vireo (Vireo bellii pusillus).

EVALUATION CRITERION 4 – DEPARTMENT OF THE INTERIOR PRIORITIES

Climate Change

The impacts of climate change are particularly important in the Western United States where water supplies are already limited. The City actively monitors climate risks to its service area locally and to the watersheds of its imported water supplies. These watersheds spanning across the Western United States include the Eastern Sierra Nevada, Northern Sierra Nevada, and the Colorado River Basin where water supplies from the LAA, SWP, and CRA originate, respectively.

The DCT AWPF Project, in support of the City's Green New Deal, is a direct response to the threat of drought specifically, and climate change at large. As discussed in previous sections, the Project aims to produce a new water supply for the City, helping us become less dependent on imported water, and more self-sufficient and resilient to the unpredictability that comes with climate change.

Disadvantaged or Underserved Communities

According to the 2020 U.S. Census, 17.2 percent of City residents are below the poverty line, approximately 1.4 times above California's rate of 12.3 percent. The City contained 170 high-poverty neighborhoods in 2018, an increase from 139 in 1980. Median household income is $70,372, about 80 percent of the State's MHI (Census, 2020).

Based on data made publicly available by the Climate and Economic Justice Screening Tool Version 1.0 (CEJST), approximately 56.4% of the total population of the City of Los Angeles are considered disadvantaged, meaning they are overburdened and underserved by at least one category of climate and economic justice burden. In fact, 89% of the disadvantaged population is burdened specifically by climate change or legacy pollution as defined by CEJST. For this reason, the City is committed to undoing this environmental injustice and to building a sustainable and equitable future for all Angelenos. The Project is one of the City's many contributions to this future.

The City recognizes that equitable water management means reliable, affordable, and safe water supplies for all residents. One of the guiding principles of the One Water LA 2040 Plan was to "incorporate environmental justice into decision-making on where projects are implemented and focus on increasing benefits in underserved communities."

Fluctuations and increases in water rates can create a burden on economically disadvantaged communities. The Project, which provides for a long-term, reliable, drought resistant water supply, also helps the City stabilize imported water price fluctuations (beyond the City's control) and minimize impacts on residents, especially those on fixed and low incomes. In recognition of the challenges faced by many residents, the City has continually considered affordability in the Project by leveraging existing infrastructure to the extent feasible. The Project's recycled water will provide a stable source of water for the region, as an equitable asset to all disadvantaged communities and ensure that droughts, natural disasters and other events do not prevent the City's most vulnerable from accessing the water they need for life.

Tribal Benefits

The project benefits all residents of the City, including the Gabrielino Tongva Nation and other tribes, by providing an equitable source of water and contributing to the replenishment or restoration of groundwater basins. For the Project's construction, local tribes will be consulted as needed per the Environmental Impact Report prepared for the Los Angeles Groundwater Replenishment Project (which contains the DCT AWPF Project).

EVALUATION CRITERION 5 – WATERSHED PERSPECTIVE

1. Will the project implement a regional or state water plan or an integrated resource management plan?

The DCT AWPF Project implements a number of state and regional water plans.

The **2020 California Water Resiliency Portfolio (Portfolio)** represents the Governor's blueprint for state water management. The portfolio encourages water supply diversity, treatment of compromised supplies, infrastructure improvements, and climate impact preparedness (including reduced reliance on SWP). The Project supports the portfolio's goal of having local and regional agencies reuse at least 2.5 million AFY by 2030.

The Project also supports the **State's 2018 Recycled Water Policy**, which recognizes the importance of recycled water as a critical water supply for California. The policy includes a goal of increasing recycled water use to 2.5 million AFY by 2030 and maximizing recycled water in areas where groundwater is in a state of overdraft.

As a member of the Greater Los Angeles County (GLAC) Region, the City has participated in the development of the **2017 Upper Los Angeles River Subregion Integrated Regional Water Management Plan (IRWMP)**, a collaborative effort to manage regional water resources. The IRWMP plans for the management of water resources in the GLAC region for the next 20 years, including recycled water projects in the City. The Project meets the plan's objectives.

The **City's Green New Deal** expands upon the City's 2015 Sustainable City pLAn with the goal to secure clean air and water and a stable climate, improving community resilience, and other initiatives. The Project will help Los Angeles improve its water supply resiliency by developing a local, drought resistant, recycled water supply; diversifying its water portfolio and reducing reliance on imported water.

The City's **One Water LA 2040 Plan** takes a holistic and collaborative approach to consider all of the City's water resources from surface water, groundwater, potable water, wastewater, recycled water, dry weather runoff, and stormwater as "One Water." Also, the Plan identifies multi departmental and multi-agency integration opportunities to manage water in a more efficient, cost effective, and sustainable manner. The Plan represents the City's continued and improved commitment to proactively manage all its water resources and implement innovative solutions, driven by the Sustainable City pLAn. The Plan helps guide strategic decisions for integrated water projects, programs, and policies within the City. The DCT AWPF Project is extensively discussed in the Plan.

The City's **2020 Urban Water Management Plan (UWMP)** provides water supply planning through 2045. It identified that recycled water from the DCTWRP will help to diversify the City's water supply portfolio by replenishing the SFGWB and providing other potential reuse opportunities.

2. Will the project help meet the water supply needs of a large geographic area, region, or watershed?

The DCT AWPF Project will produce 17,000 AFY of water for groundwater recharge at the SFGWB via spreading at the HSG. At the City's 2020 water use rate of 106 gallons per capita per day, this volume of water can supply approximately 150,000 residents with drinking water in the City each day. The SFGWB is a major source of local groundwater for the City that has provided on average 47,000 AFY from 2015 to 2020 – meaning that the DCT AWPF Project can contribute to more than a third of the SFGWB's utilization.

3. Does the project promote collaborative partnerships to address water related issues?

The DCT AWPF Project is a part of the larger Los Angeles Groundwater Replenishment Project (LAGWR), which is a collaborative effort between LADWP and LASAN. LASAN owns and operates the DCTWRP, while LADWP has the water delivery authority. The two agencies have worked closely since the early planning stages of the GWR Project and will continue to do so to ensure that all administrative, technical, environmental, and financial aspects are managed collaboratively and effectively.

4. Discuss public outreach and opportunities for the public to learn about the project?

Since 2009, the City has undertaken a substantive and ambitious outreach program for our recycled water program at large, which includes the DCT AWPF Project. This outreach program has included forming a Recycled Water Advisory Group, holding one-on-one sessions with key community leaders, conducting briefings for City Councilmembers and other officials, delivering presentations to Neighborhood Councils and Community Groups, completing a series of Recycled Water Forums and responding openly and transparently to Press inquiries. Public outreach activities were performed in preparation of the Environmental Impact Report for the LAGWR project in 2016. The DCT AWPF Project's outreach goals are to continue to engage members of the City's diverse population, to share thorough, fact-based, easy-to-understand information, and to collect feedback on the City's plans. The DCT AWPF Project also has a dedicated web page on LASAN's website for the public to learn more about the project and track its progress.

Attachment A: Required Permits and Approvals

Donald C. Tillman Water Reclamation Plant Advanced Water Purification Project
Required Permits and Approvals

Government Agency	Approval/Permit	Permit Holder	Document Lead	Notes
California Natural Resources Agency (CNRA), and United States Environmental Protection Agency (USEPA)	CEQA and NEPA	City (Lead Agency)	City with DB Contractor Support	In addition to being subject to CEQA, this project involves federal funding and permission to alter a federal facility and is therefore subject to NEPA
State Water Resources Control Board (SWRCB) / Regional Water Quality Control Board (RWQCB)	Application / Requirements for Groundwater Replenishment Reuse Projects (GRRPs) using surface application per Title 22 CCR §60320.100	City	City with DB Contractor Support	City shall submit a report to the Department and appropriate Regional Board assessing the AWPF's compliance with the requirements of Title 22 CCR Title 22 CCR also requires a "Report of Compliance", "Public Hearing", and an "Operation Optimization Plan".
SWRCB / RWQCB	Title 22 Engineering Report per Title 22 CCR §60323	City	City with DB Contractor Support	City shall submit an engineering report to the Department for approval. The report shall include the following: • A description of the design of the proposed reclamation system. • The report shall clearly indicate the means for compliance with these regulations and any other features specified by the regulatory agency.

				• The report shall contain a contingency plan which will assure that no untreated or inadequately treated wastewater will be delivered to the use area.
SWRCB / RWQCB	SWRCB Recycled Water Policy (2009): §6: SNMP	City	City with DB Contractor Support	SNMPs provide a roadmap for management of salt and nutrient loadings on a basin or watershed-wide basis to ensure protection of beneficial uses. The SNMP will be prepared in alignment with existing guidelines and comply with the following regulatory requirements: • Water Quality Control Plan for the Los Angeles Basin (Basin Plan). • SWRCB Recycled Water Policy (2009) • SWRCB Anti-Degradation Policy – Resolution No. 68-16 • CEQA regulations
SWRCB / RWQCB	General Construction Activity Stormwater Permit (General Permit)	City	DB Contractor	Dischargers whose projects disturb one (1) or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. This includes: • Preparation of a Storm Water Pollution Prevention Plan (SWPPP). • Prepare/submit Notice of Intent (NOI). Timing: Submit at least 14 days prior to construction.
California Department of Transportation (Caltrans) California Natural Resources Agency	Special Transport Permit	DB Contractor	DB Contractor	Caltrans has discretionary authority with respect to highways under its jurisdiction and may, upon application and if good cause appears, issue a special permit to operate or move a vehicle or combination of vehicles or special mobile equipment of a size or weight of vehicle or load exceeding the maximum limitations specified in the California Vehicle

				Code. The Caltrans Transportation Permits Issuance Branch is responsible for the issuance of these special transportation permits for oversize/overweight vehicles on the State Highway System. Timing: Prior to transport/need.
South Coast Air Quality Management District (SCAQMD)	Permit to Construct (PC): Evaluation as per Rule 219 and 222	DB Contractor	DB Contractor	Prior to installation of new or relocated equipment, or prior to modification of an existing equipment, the operator of the equipment is required to obtain a PC from the SCAQMD: Process includes the following: • Evaluation under Rule 219/222 • Permit Application Preparation/Submittal: Submit Form 400A, Form 400-CEQA and a supplemental Form 400-E-xx (As needed). • Timing: Prior to Construction.
SCAQMD	Permit to Operate (PO): Evaluation as per Rule 219 and 222	City	DB Contractor	Once a piece of equipment is installed, modified, and/or operated, SCAQMD processes the application for a PO
LADWP/LASAN	Sewer Connection (if needed for "new brine line" connection)	City	DB Contractor	If a new "brine line" is required a connection to the City's sewer system, LA Department of Public Works (LADPW) will be needed. Construction of a "brine line" will require coordination with LADPW/LASAN and may include the following: • Encroachment Permit (Road Right of Way) • Excavation Permit (Road Right of Way) • Construction permit • Connection and compliance with publicly owned treatment works (POTWs) requirements. (Industrial Wastewater Requirements).

				Timing: Prior to construction phase. (Note: The POTW may establish sample/monitoring requirements for discharges during the operational phase.)
City of LA; Department of Building and Safety	Building Permit	DB Contractor	DB Contractor	Contractor will coordination with the LADPW Department of Building and Safety: • Plan Check • Permit Application Preparation/Submittal • Inspection.
City of LA Fire Department	Fire Department Permit	DB Contractor	DB Contractor	The Contractor will coordinate with the City of Los Angeles Fire Department for a Fire Department Permit. • Prepare/Submit Application for Plan Check • Plan Check: Conduct Fire Life Safety Plan Check and Fire Life Safety Inspections interpreting and enforcing applicable standards of the Fire Code, Title 19, Uniform Building Code, City, and National codes concerning new construction and remodeling • Inspection • Compliance with "Health Hazardous Material Division" Requirements (If Applicable).
USACE	EC 1165-2-216 – Policy and Procedural Guidance for Processing Requests to Alter USACE Civil Works Projects Pursuant to 33 USC 408 (if applicable)	City	City with DB Contractor Support	Because DCTWRP is located within the Sepulveda Basin, which is owned by the USACE and leased to the City, modification to the facility may require "Permission to alter". Basic steps include: (1) Pre-Coordination (2) Written Request (3) Preparation of Required Documentation (4) District Agency Technical Review (5) Summary of Findings (6) Division Review (if required) (7) HQ Review (if required) (8) Notification

				(9) Post-Permission Oversight Timing: "Pre-coordination" and the "Written Request" should begin early in the "engineering phase" of the Project. Information from the "Written Request" will be used by the USACE/District to determine documentation requirements and timelines for subsequent steps.
City of LA, Department of Building and Safety	Grading Permit	DB Contractor	DB Contractor	Department of "Building and Safety" reviews grading plans for code compliance, issues grading permits, and inspects grading and construction work. Code review include compliance with all zoning ordinance. Coordination with Contract City offices/local planning agencies is also required for compliance City regulations/requirements that could impact grading. Timing: Generally, plans and permit for grading must be processed and issued separately from and prior to any building permit on the property. Building permits cannot be issued until rough grading (graded soil surface is within six inches of final planned grade or elevation and all rough drainage devices are installed) is complete and approved by the Building Inspector.

Attachment B: Official Resolution

An official resolution will be taken to the City Council, and the adopted resolution will be submitted prior to the April 29, 2023 deadline. Please see the draft resolution on the next page.

DRAFT RESOLUTION

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LOS ANGELES TO ACCEPT GRANT FUNDS FROM THE BUREAU OF RECLAMATION, FOR THE WATERSMART WATER RECYCLING AND DESALINATION PLANNING PROJECT GRANT PROGRAM

WHEREAS, as of July 2022, the U.S. Drought Monitor indicates that more than 93% of the land in nine of the Western states is in drought conditions, and nearly 60% of the area is experiencing extreme or exceptional drought; and

WHEREAS, the City of Los Angeles (City) is the most populous city of California and the second most populous city in the United States. The City is primarily reliant on imported water supplies, which are highly vulnerable to cutbacks from droughts, environmental demands, natural disasters and infrastructure failures; and

WHEREAS, social and economic impacts associated with the City's water supply challenges include limited supplies to meet demands, increased cost of living, fire hazards, natural disasters, and rising imported water cost; and

WHEREAS, the United States Department of the Interior, Bureau of Reclamation (Reclamation)'s WaterSMART Grant Program provides financial assistance for projects that seek to conserve and use water more efficiently and accomplish other benefits that contribute to sustainability in the Western United States (West); and

WHEREAS, water recycling projects develop and supplement urban and irrigation water supplies through water reuse—thereby improving efficiency, providing flexibility during water shortages, and diversifying the water supply; and

WHEREAS, these projects provide Los Angeles with new sources of clean water which increases water management flexibility and makes our water supply more reliable; and

WHEREAS, the Infrastructure Investment and Jobs Act was passed in November 2021, which provided $1 billion ($1,000,000,000) over five years for Western water recycling programs through Reclamation; and

WHEREAS, the Reclamation's WaterSMART: Water Recycling and Desalination Planning Program (Grant) includes up to $30 million ($30,000,000) in funding available for feasibility studies, planning activities, preliminary design and environmental compliance activities that support the development of water recycling and desalination projects that will supplement existing fresh water supplies in urban and agricultural areas in the Western United States; and

WHEREAS, the City published L.A.'s Green New Deal (GND) in 2019 which set various targets to tackle the climate emergency, including sourcing 70 percent of the City's

water locally and recycling 100 percent of all wastewater for beneficial reuse by 2035; and

WHEREAS, the Bureau of Sanitation seeks to meet the GND's targets with the Donald C. Tillman Water Reclamation Plant Water Purification Facility Project and the Hyperion 2035: Phase 1 Project (Projects), which will deliver 15.5 million gallons per day (MGD) by 2027 and 50 MGD of recycled water by 2035, respectively; and

WHEREAS, the Bureau of Sanitation is submitting two applications to the Grant to request up to $5 million ($5,000,000) in funding to support planning and design of each of the Projects; and

NOW, THEREFORE, BE IT RESOLVED, with the concurrence of the Mayor, the City Council of the City of Los Angeles hereby:

1. Authorizes the Director and General Manager of the Bureau of Sanitation, or designee, to negotiate, accept, execute, and submit all documents, including, but not limited to, applications, agreements, amendments, and payment requests etc., by the deadlines established by the grantor, subject to the approval of the City Attorney as to form, which may be necessary to secure the WaterSMART Water Recycling and Desalination Planning Project Grant Program, through the United States Department of the Interior, Bureau of Reclamation, in an amount not to exceed **$5 million** (**$5,000,000) EACH**, for the implementation of the **HYPERION 2035 PHASE 1 AND D.C. TILLMAN ADVANCED WATER PURIFICATION WATER RECYCLING PLANNING PROJECTS**.

ADOPTED BY THE CITY COUNCIL on: _____.
I, the undersigned, hereby certify that the foregoing Resolution was duly adopted by the Council of the City of Los Angeles.

_____
City Clerk

Attachment C: Letter of Support

TED W. LIEU
36TH DISTRICT, CALIFORNIA

COMMITTEE ON THE JUDICIARY

COMMITTEE ON FOREIGN AFFAIRS

Congress of the United States
House of Representatives
Washington, DC 20515-0536

2454 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-3976

1645 CORINTH AVENUE, SUITE 101
LOS ANGELES, CA 90025
(323) 651-1040

1600 ROSECRANS AVENUE, 4TH FLOOR
MANHATTAN BEACH, CA 90266
(310) 321-7664

February
1

The Honorable Camille Calimlim Touton
Commissioner
U.S. Bureau of Reclamation
849 C Street NW
Washington D.C. 4

Dear Commissioner Touton

I write in support of the application submitted by Los Angeles Sanitation and Environment (LASAN) to the Bureau of Reclamation for a WaterSMART Water Recycling and Desalination Planning grant. LASAN is requesting $5 million in funding to support the Phase Project of the Hyperion 5 Program (Hyperion 5). Hyperion 5 is expected to deliver 5 million gallons per day of purified recycled water to the city of Los Angeles (City) as early as .
1

LASAN's Hyperion Water Reclamation Plant (HWRP) is the City's largest wastewater treatment facility and the largest source of recycled water for potable and non-potable purposes. The HWRP serves a population of four million covering an area of over 6 square miles and discharges approximately million gallons per day of fully treated wastewater into Santa Monica Bay. The Hyperion 5 project will transform the HWPR into a water recycling hub and produce million gallons of purified recycled water per day for reuse through advanced water purification treatment. Under Hyperion 5 the City of Los Angeles will have local reliable and resilient water supply.
1

If this proposal is fully funded LASAN will initiate Phase Project of Hyperion 5 to produce purified water and meet indirect potable reuse standards for various uses including groundwater recharge and injection to prevent sea water intrusion. Hyperion 5 will have the ability to provide approximately 5 percent of the City's water demand. The development of this project will allow Los Angeles to address current and future periods of drought and reduce its reliance on imported water.

I ask that you give this application full and fair consideration consistent with all applicable laws rules and regulations. Should your staff have any questions please contact Ariana Heydari and Janet Mendez in my district office at ( ) 65 – 4 .

Sincerely

Ted W. Lieu

Ted Lieu
Member of Congress 1

KAREN BASS
MAYOR

The Honorable Camille Touton
Commissioner
U.S. Bureau of Reclamation
1849 C Street NW
Washington DC 20240-0001

Re: Letter of Support for Los Angeles Sanitation and Environment Department Application for Donald C. Tillman Water Reclamation Plant Advanced Water Purification Facility - FY2023 WaterSMART Water Recycling and Desalination Planning Program (Funding Opportunity Number R23AS00076)

Dear Commissioner Touton:

I write in support of the proposal submitted by the Los Angeles Sanitation and Environment Department (LASAN) to the Bureau of Reclamation's FY2023 WaterSMART: Water Recycling and Desalination Planning Program (Funding Opportunity Number R23AS00076). The requested $5 million will help fund the Donald C. Tillman Water Reclamation Plant (DCTWRP) Advanced Water Purification Facility Project (AWPF).

The DCTWRP AWPF will produce purified recycled water to enhance Los Angeles' local water supply. This project directly supports the Los Angeles Sustainability Plan to locally source 70% of the City's water needs and recycle 100% of the City's wastewater. As climate change has impacted the Los Angeles region through a years-long severe drought, it is expected that conditions will not improve in the coming years, and the conditions will exacerbate the region's water unreliability.

To help alleviate the impact, the DCTWRP AWPF will produce 15.5 million gallons per day of indirect potable reuse recycled water suitable for groundwater replenishment in the San Fernando Valley by 2027. Potential future projects will expand the DCTWRP's capacity to recycle 100% of the plant's flow to produce up to 31 million gallons per day of recycled water – enough to supply 400,000 residents with drinking water every year.

Awarded funding will support the continued progress toward water sustainability and resiliency in Los Angeles. Thank you for your consideration of this proposal and for your commitment to water sustainability and resiliency for Los Angeles.

Sincerely,

Karen Bass
Mayor of Los Angeles

Attachment D: Statements

Overlap or Duplication of Effort Statement:
The Donald C. Tillman Water Reclamation Plant Advanced Water Purification Facility Project does not overlap with any other active or anticipated projects in terms of funding, activities, costs or commitment of key personnel.

Uniform Audit Reporting Statement:
The City was required to submit a Single Audit report for the most recently closed fiscal year. The City's Employer Identification Number (EIN) associated with that report is 95-6000735. The report is available through the Federal Audit Clearinghouse website.

Conflict of Interest Disclosure Statement:
The City has no conflicts of interest to disclose.

Attachment E: Required Federal Forms

Please see attached:

- SF-424
- SF-424A
- SF-424B
- Lobbying Form

February 28, 2023

Donald C. Tillman Water Reclamation Plant
Advanced Water Purification Facility Project

Project Budget
for

WaterSMART: Water Recycling and Desalination Planning
Funding Opportunity Number: R23AS00076

The total cost of the Donald C. Tillman Water Reclamation Plant Advanced Water Purification Facility Project to be expended by the City of Los Angeles before October 31, 2025, on engineering activities for the Project's 100% design completion is $22,830,735.
LASAN is requesting the Bureau of Reclamation $5,000,000 in grant funding for the Project.

This Project Budget document includes the following:

- Funding Plan.
- Letters of Commitment.
- Budget Proposal.
- Budget Narrative.

FUNDING PLAN

The non-federal cost-share contribution of $16,415,458 for the Phase 1 Project will be provided by the City of Los Angeles.

The funds to be provided by the City have already been committed and are immediately available. There are no constraints on or contingencies associated with the availability of these funds.

The costs to be incurred and paid for by LASAN for the DCT AWPF Project's 100% design will be reimbursed by LADWP, per our Memorandum of Agreement executed February 8, 2023. The Agreement is attached at the end of this Project Budget document.

LASAN has not received nor anticipates receiving any third-party contributions for the Project planning activities.

LASAN has a loan agreement with the United States Environmental Protection Agency under the Water Infrastructure Finance and Innovation Act (WIFIA) for a scope of work that includes the DCT AWPF Project's design as well as its construction and other enabling components. However, this loan will not be used to fund the engineering activities for the DCT AWPF Project's design and will not overlap with the use of the Bureau of Reclamation's grant funding. The Bureau of Reclamation's grant funding and the WIFIA loan will not affect nor are they in conflict with the cost sharing requirements of each other.

BUDGET PROPOSAL

Please refer to Table 1 for a summary of the non-federal and federal cost share contributions, and Table 2 for the total project cost.

Table 1: Summary of Non-Federal and Federal Funding Sources

Funding Sources	Funding Amount
1. City of Los Angeles	$17,830,735
Total Non-Federal Funding	**$17,830,735**
Requested Reclamation Funding	**$5,000,000**

Table 2: DCT AWPF Project Budget Proposal

	Funding Amount
Cost to be reimbursed with requested federal funding	$5,000,000
Cost to be paid by the applicant	$17,830,735
Value of third-party contributions	$0
Total Project Cost	**$22,830,735**

BUDGET NARRATIVE

The following budget narrative provides a discussion of items included in the budget proposal above and provides a budget breakdown and detailed support for the various tasks associated with Project. Budget categories that are listed as Not Applicable or have no costs associated with them are not included in the budget proposal for the project.

Salaries and Wages and Fringe Benefits

There are no salaries and wages or fringe benefits associated with LASAN staff being claimed as grant requested funds.

Travel

There are no travel costs being claimed as grant requested funds.

Equipment

There are no equipment costs being claimed as grant requested funds.

Supplies and Materials

There are no supplies and materials being claimed as grant requested funds.

Construction

There are no construction costs being claimed as grant requested funds.

Third Party Materials

There are no third-party materials being claimed as grant requested funds.

Other Direct Costs

There are no Other Direct Costs associated with the Project.

Other Indirect Costs

There are no other expenses being claimed as grant requested funds.

Consultant (Planning and Design Services)

Costs associated with this element are related to the planning and design of the AWPF at DCTWRP, delivered through a progressive design build (PDB) approach. A request for proposal (RFP) was used to acquire the Owner's Advisor/Design Team; Request for qualification (RFQ) is ongoing for all the treatment equipment procurement as part of the overall AWPF implementation. The following summarizes the engineering phase planning activities that potential grant funds would support, in the amount of $22,822,735:

<u>Engineering Phase NTP:</u>

Upon selection of the PDB contractor and successful negotiation, the NTP for the Engineering Phase will be issued. This will allow the EOR to begin the design effort for the AWPF.

The total cost for the engineering phase are as follows:

- Design initiation: $270,311

- Project Coordination and Management: $2,398,664
- Project Requirements and Existing Documentation Review: $53,873
- Site Investigation: $350,445

Basis of Design Report (BODR):

The BODR shall reflect the PDB contractor preliminary design and findings. The BODR will present information, criteria, and logic associated with the major decisions relative to the AWPF design basis and provide criteria for each design discipline. The process flow diagram, process design criteria, hydraulic profile, site layout, and the descriptions of the utility connections will be included in the BODR. A detailed construction sequence and schedule will also be prepared to demonstrate the ability of the PDB contractor to build the facilities while following the work restrictions defined.

The total cost for the design report are as follows:

- Basis of Design Report (BODR): $2,339,811
- Building Information Modeling: $481,446

Technical Exhibit Documents:

The technical exhibit documents (plans and specifications) will be developed to a point of 70%, with a design submittal at 30% design completion and a design submittal at 70% design completion. The 30 % design will define the major treatment process units and provide completed and outlined technical specifications for review by LASAN. Preliminary piping and instrumentation diagrams (P&IDs), major mechanical plans and sections, major yard piping, and preliminary electrical one-line diagrams will all be established. The 70% design will reflect the comments and inputs received on the BODR and the percent documents. Inputs from the constructability review performed at the 70 percent design will also be incorporated in the design. P&IDs will be final, and the control architecture provided. Mechanical plans will detail equipment and piping arrangements further. Civil plans will be advanced to include grading, paving, and yard piping. Structural plans will show foundation plans, supporting beams and columns, and roofing system. Electrical plans will include site plan, lighting plans, motor control center elevations, and final one-line diagrams. Draft final specifications will be available.

The total cost for the technical exhibit documents are as follows:

- Technical Exhibit Documents (BODR 30%): $2,880,302
- Technical Exhibit Documents (30% to 70%): $5,226,700
- Governmental Approval Assistance: $305,953
- Cost Estimates (BODR and 30%): $330,929
- Cost Estimates (70% and Cost Proposal): $752,293
- Plant-Wide Distributed Control System Integration Design and Coordination (Allowance): $250,000

- Operation and Maintenance Plan $304,366

Finalize Design Allowance:

This period covers the time necessary for the contractor to complete the remaining part of the design and produce the plans and specifications that will be submitted to get the building permit. The Final Design Allowance is to be utilized during the Engineering Phase if LASAN authorizes Contractor to proceed with final design.

The total cost for the final design allowance is $6,877,642

LETTERS OF FUNDING COMMITMENT

Please see attached the Memorandum of Agreement between the City of Los Angeles Bureau of Sanitation and the Los Angeles Department of Water and Power, regarding the cost sharing for the DCT AWPF Project's design among other items unrelated to this grant application.